Amendments to the Claims

The listing of claims will replace all prior versions, and listings of claims in the application.

1. (Currently Amended) A method comprising:

applying [[a]] individual voltages ~~voltage~~ having [[a]] respective voltage [[value]] values substantially simultaneously to each of a plurality of pixels in a spatial light modulator (SLM) to move at least one individual pixel from the plurality of pixels;

reflecting light from the at least one moved individual pixel ~~pixels~~;

passing the reflected light from the at least one individual pixel through an apodized pupil in an optical system;

using a semi-plane knife-edge to block, from only one side at a time, a zero order lobe of a pixel diffraction pattern associated with the individual pixel at the apodized pupil;

capturing an image of the at least one individual pixel from the reflected light after it passes through the apodized pupil;

independently resolving individual pixels among the plurality of pixels using the apodized pupil;

correlating the image of the individually resolved pixels and the respective voltage [[value]] values to generate [[a]] respective result ~~signal~~ signals; and

calibrating the individually resolved pixels including the at least one individual pixel ~~pixels~~ using the respective result ~~signal~~ signals.

2. (Canceled)

3. (Previously Presented) The method of claim 1, further comprising using a charge coupled device (CCD) array to perform the capturing step.

4. (Canceled)

5. (Original) The method of claim 3, wherein the image of each of the pixels is captured using more than one cell in the CCD array.

6. (Currently Amended) The method of claim 1, further comprising:

tilting the at least one individual pixel through a plurality of desired angles; and

performing the capturing step for each of the desired angles.

7. (Currently Amended) The method of claim 1, further comprising:

tilting the at least one individual pixel through a set of angles;

performing the capturing step at each angle in the set of angles; and

using interpolation to determine a voltage value that moves the at least one individual pixel to an angle outside the set of angles.

8. (Canceled)

9. (Previously Presented) The method of claim 1, further comprising forming the apodized pupil using one of an annular and a semi-circular pattern.

10. (Original) The method of claim 1, further comprising forming the apodized pupil using one of a semi-plane, a shearing grating, and an algorithm derived apodization pattern, such that variations are present in at least one of transmittance and phase.

11-12. (Canceled)

13. (Previously Presented) The system of claim 24, wherein the detector comprises a charge coupled device (CCD) array.

14. (Canceled)

15. (Currently Amended) The system of claim 13, wherein an image of each of the individual pixels is measured using more than one cell in the CCD array.

16-17. (Canceled)

18. (Previously Presented) The system of claim 24, further comprising one of a shearing grating, an algorithm derived apodization pattern, an annular pattern, and a semi-circular pattern to apodize the pupil, such that variations are present in at least one of transmittance and phase.

19. (Currently Amended) The system of claim 24, wherein:

the voltage moves each of the individual pixels through a plurality of desired angles; and

the correlating device determines a [[first]] second result signal for each of the desired angles.

20. (Currently Amended) The system of claim 19, wherein:

the detector captures an image at each angle in the plurality of desired angles; and

the correlating device uses interpolation to determine a ~~second~~ third result signal for angles falling outside the plurality of desired angles.

21. (Previously Presented) The system of claim 24, wherein the optical system comprises projection optics of a lithography tool.

22. (Currently Amended) The method of claim 1, wherein the image of each of the plurality of pixels is captured using one cell in a CCD array.

23. (Currently Amended) The system of claim 13, wherein the image of each of the individual pixels is captured using one cell in a CCD array.

24. (Currently Amended) A system comprising:

a voltage value storage configured to substantially simultaneously transmit [[a]] individual voltages ~~voltage~~ having [[a]] voltage [[value]] values to corresponding individual pixels in a spatial light modulator (SLM) to move the individual pixels;

a semi-plane knife edge device configured to apodize a pupil in an optical system, wherein the semi-plane knife edge device blocks, from only one side at a time, a zero order lobe of a pixel diffraction pattern associated with each of the individual pixels at the apodized pupil;

a detector configured to capture an image corresponding to each of the individual pixels from light that has reflected off the SLM and passed through the semi-plane knife edge device;

a correlating device configured to correlate the image and the voltage [[value]] values to generate a first result signal, respectively for each of the individual pixels, for independently resolving each of the individual pixels substantially simultaneously; and

a controller configured to calibrate the resolved individual pixels using the first result signal.